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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,865	12/07/2005	Stefan Haaks	2003P08356wous	7446

7590 04/20/2007  
Siemens Corporation  
Intellectual Property Department  
170 Wood Avenue South  
Iselin, NJ 08830

EXAMINER
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LAUGHLIN, NATHAN L

ART UNIT	PAPER NUMBER
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2125

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/20/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/559,865

Applicant(s)

HAAKS ET AL.

Examiner

Nate Laughlin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 12-7-05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because figure 2 contain unlabeled rectangular boxes. All rectangular boxes must be labeled. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Claim Objections***

2. Claim 23 is objected to because of the following informalities: On line 8 of claim 23 the word "detected" is used, Examiner believes it should read "detect". Appropriate correction is required.

Claim 36 uses the term "off", Examiner believes that it should be "of" and has been examiner as such.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 23 recites the limitation "the process variables" in claim 23. There is insufficient antecedent basis for this limitation in the claim.

Claim 23 recites the limitation "variable signals" in claim 23. There is insufficient antecedent basis for this limitation in the claim. Applicant makes reference to only one variable signal.

Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant states that the detecting device indicates a time and/or location of the process variable signal. Then the next limitation uses both time and location. Examiner believes that the detecting device should indicate both time and location for the correlation device to function properly.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claim 23 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The steps of claim 23 consist solely of software operations without practical application in the technological arts or simply manipulate

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abstract ideas without practical application in the technological art. Claim 23 is directed merely to determination that is not tied to a technological art, environment, or machine which would result in a practical application producing a concrete, useful, or tangible result to form the basis of statutory subject matter under U.S.C. 101. Also, claims 24-31 are also rejected under 101 because all claims depend back to claim 23. Applicant is advised to revise all claims that do not result in a concrete, useful and tangible result.

To expedite a complete examination of the instant application claim 23 is rejected under 35 U.S.C. 101 (non-statutory) above is further rejected below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 23-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Grover et al (U.S. Pat. 6,790,680).

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As to claim 23, Grover teaches a method for determining the causes of failures in industrial processes, comprising: at least one signal source for outputting a variable in the continuous process and producing a process variable signal (fig. 1 , element 115); a detecting device that receives the process variable signal from the signal source in the continuous process and indicates the time and/or location of the process variable signal (col. 9 line 61 col. 10 line 19) ; and a correlating device that correlates the time and location process variable signal from the detecting device and correlates all the variable signals to detected the process variables and the time and location of a failure to determine the cause of the failure (col. 10 line 20-46).

As to claim 24, Grover teaches correlating devices determines the process variables signals that exhibit no significant correlation with the failure and excludes those process signals variables from the cause of the failure (col. 10 lines 47-54).

As to claim 25, Grover teaches the correlating devices perform the function of eliminating the process variables that are a consequence of the failure rather than a cause of the failure by comparing the time of the failure to the time of a particular process (col. 10 line 20-46).

As to claim 26, Grover teaches the correlating device continuously performs elimination routines to narrow down the process variable to determine which process variable is directly related to the failure to determine the location on the industrial process of the

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failure (col. 10 line 20-46).

As to claim 27, Grover teaches correlating device determines if a sub process in the industrial process is the location of the failure to determine the cause of the failure (col. 10 line 55- col. 11 line 8).

As to claim 28, Grover teaches the correlating device determines if the cause of the failure is located in the sub process and evaluates the sub process to determine the root cause of the failure (col. 10 line 55- col. 11 line 8).

As to claim 29, Grover teaches the correlation devices utilizes the time correlations to determine if a failure is a technical failure in the industrial process equipment (col. 5 lines 38-67).

As to claim 30, Grover teaches the correlation devices utilizes the location correlations to determine if a failure is a technical failure in the industrial process equipment (col. 9 line 61 - col. 10 line 19).

As to claim 31, Grover teaches the steps of communicating using a communication device to a service provider the correlation and the service provider monitoring the correlation data to provide service in the event a failure occurs to the industrial process to correct the failure (col. 7 lines 30-44).

As to claim 32, Grover teaches a device for determining causes of failures in industrial processes, comprising; a detection unit that detects process variables and the time and/or location of a failure, an evaluation unit that determines correlations between the detected process variables and the time and/or location of the failure, and an output unit that outputs the process variables correlating with the time and/or location of the failure (col. 10 line 20-47, col. 7 line 30-46).

As to claim 33, Grover teaches the detection unit consists of: a) at least one measuring bus system that is part of a bus system or plurality of bus systems of an automation unit for controlling and/or regulating the industrial process (fig. 1), b) at least one measuring head for detecting measuring signals, which is connected on the input side to a signal source of the industrial process that are already present and/or to be provided additionally and on the output side in a predefined form to the measuring bus system (fig. 1, 3), and c) one or a plurality of data concentrators, which are connected to the measuring bus system (fig. 3).

As to claim 34, Grover teaches at least one measuring head is provided, which is connected on an input side to any bus system of the industrial process (fig. 1 element 115).

As to claim 35, Grover teaches at least one measuring head is provided, which is



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connected on an output side directly to a data concentrator of the industrial process (fig. 3 element 340).

As to claim 36, Grover teaches further comprising a communication unit that automatically sets up a line of communication between the data concentrators and measuring heads (fig. 3).

As to claim 37, Grover teaches the measuring signals are time-stamped (col. 9 line 46-61).

As to claim 38, Grover teaches the at least one measuring head is provided, which is connected to a signal source supplying a standard time signal (col. 9 line 46-61).

As to claim 39, Grover teaches the data concentrators are further extended to accommodate any number of measuring bus systems and measuring heads (fig. 1).

As to claim 40, Grover teaches at least one display unit to display the outputted process variables for viewing by an operator (col. 9 line 61 - col. 10 line 19).

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Zeif (U.S. PG Pub 2007/0043464) teaches an industrial process

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that uses real-time fault monitoring. Coss, Jr. et al (U.S. Pat. 7,200,779) teaches a fault monitoring system for process tools.

***Inquiry***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nate Laughlin whose telephone number is 571-270-1042. The examiner can normally be reached on Monday - Friday 8am-5pm with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nate Laughlin

4-5-07



KIDEST BAHTA  
PRIMARY EXAMINER  
TECHNOLOGY CENTER 2100

